

Notice of Allowability

Application No.

10/823,620

Examiner

Dana Ross

Applicant(s)

REHN ET AL

Art Unit

3722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 6/14/05.
2. ☒ The allowed claim(s) is/are 1-6.
3. ☒ The drawings filed on 14 April 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Alan Kopecki on 16 June 2005.

The application has been amended as follows:

In the claims:

Claim 1. (Amended) A machine spindle comprising:

- a casing defining a center axis; and
- a clamping mechanism disposed in the casing, the clamping mechanism comprising:
 - a front drawbar having axially spaced front and rear ends, the front end carrying a tool clamp operable to clamp a tool in response to rearward movement of the front drawbar,
 - a rear drawbar arranged behind the front drawbar;
 - a force transmitting mechanism for transmitting rearward motion of the rear drawbar to the front drawbar for movement of the front drawbar rearwardly, wherein the force-transmitting mechanism comprises a force-amplifier wedge arrangement;
 - a gas spring for biasing the rear drawbar rearwardly comprising:

a housing disposed in the casing and defining a gas chamber
having a front wall disposed behind the wedge arrangement and through
which the rear drawbar extends, and
a piston disposed in the gas chamber for axial movement therein
and releasably connected to a rear end of the rear drawbar by a
releasable coupling disposed in the chamber.

Allowable Subject Matter

2. Claims 1-6 are allowed.
3. The following is an examiner's statement of reasons for allowance: The prior art of record neither anticipates nor renders obvious a machine spindle as claimed in independent claims 1 or 6, specifically wherein the clamping mechanism comprises a force transmitting mechanism with a force amplifier wedge arrangement and a gas spring housing disposed in the casing and defining a gas chamber having a front wall *disposed behind the wedge arrangement* and through which the drawbar extends (independent claim 1) or a piston disposed in the gas chamber *in contact with the gas* (independent claim 6).

The closest prior art of record is US Pat. No. 6,722,827 (Anderson, hereafter '827).

'827 teaches a tool clamping device with a gas spring. Though '827 uses different terminology to define parts of the spindle, examiner notes that, in Figure 1, reference number 16 is a front drawbar, 9 a rear drawbar, the front and rear drawbars connected with a threaded coupling (col. 3, lines 12-14), the rear drawbar connected to a pushrod (piston) 25 through a threaded coupling (col. 3, lines 52-57); a gas spring 5 and a chamber with housing 7 (see fig. 1).

'827 further teaches a force transmitting mechanism can be a system of wedges (col. 4, lines 50-54).

'827 does not teach the location of the system of wedges, specifically the gas spring with gas chamber having a front wall disposed behind the wedge arrangement (as claimed in independent claim 1).

'827 teaches the pushrod 25 (piston) threadingly engaged to the rear drawbar 9 with an arrangement of seals 11 and 12 to prevent the gas from coming in contact with the pushrod 25 (piston).

'827 does not disclose the pushrod 25 (piston) "in contact with the gas" (as claimed in independent claim 6).

Therefore '827 does not anticipate the claimed inventions of independent claims 1 or 6.

Furthermore, there is no prior art, either alone or in combination with '827 that would render obvious the claimed inventions, and no motivation found to modify '827 to obtain the claimed inventions.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dana Ross whose telephone number is 571-272-4480. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on 571-272-4419. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


dmr


BOYER D. ASHLEY
PRIMARY EXAMINER